

**ABSTRACT**

The invention is the discovery of an actinomycete genus, given the name *Salinospora* gen. nov., that displays an obligate requirement of seawater ( $\text{Na}^+$ ) for growth and unique 16S rRNA signature nucleotides. The invention is also the use of the genus for the production and discovery of active biomolecules such as pharmaceutical agents, agrichemicals, immunomodifiers, enzymes and enzyme inhibitors.